

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A TRAFFIC SIGNAL WITH LIGHTING ON MD 119 (GREAT SENECA HIGHWAY) AT DAWSON FARM ROAD/CLIMBING IVY DRIVE IN MONTGOMERY COUNTY. VIDEO DETECTION SHALL BE INSTALLED TO PROVIDE LEFT TURN BAY DETECTION, SIDE STREET DETECTION AND SAMPLING STATIONS. THE SIGNAL SHALL BE CONNECTED TO THE EXISTING INTERCONNECT SYSTEM AT A NEW SPLICE CABINET TO BE POLE MOUNTED IN THE MEDIAN ON THE SOUTH LEG OF THE INTERSECTION. LIGHTING SHALL BE UPGRADED BY PROVIDING NEW FIXTURES ON THE SIGNAL STRUCTURES AND REMOVING TWO EXISTING STREET LIGHT POLES. MD 119 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION
NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A FIVE PHASE SEMI-TRAFFIC-ACTUATED MODE WITH THE MD 119 APPROACHES RUNNING CONCURRENTLY AND THE DAWSON FARM ROAD/CLIMBING IVY DRIVE APPROACHES RUNNING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT TURN PHASING IS PROVIDED FOR THE SOUTH LEG OF MD 119.

AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE NORTH LEG OF MD 119.

CONTROLLER REQUIREMENTS

AN ASC/2S TRAFFIC SIGNAL CONTROLLER WITH VIDEO INTERFACE EQUIPMENT AND LAU HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET SHALL BE UTILIZED.

PROJECT CONTACTS

CONTACTS FOR DISTRICT 3:

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MR. AUGIE REBISH
DISTRICT UTILITIES ENGINEER
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MR. RALEIGH MEDLEY
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

CONTACTS FOR MONTGOMERY COUNTY:

MR. BOB GONZALES
MONTGOMERY COUNTY D.P.W. - ATMS
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POWER COMPANY REPRESENTATIVE:

MR. STEVE CUSTER
POTOMAC ELECTRIC AND POWER COMPANY
PHONE: (301) 931-2880

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

QUANTITY	DESCRIPTION
287 S.F.	SHEET ALUMINUM SIGNS
- 1 EACH	R10-12 (36"x42") - MAST ARM MOUNT
- 2 EACH	D-3(1) MODIFIED "CLIMBING IVY/DAWSON FARM" (32"x96") - MAST ARM MOUNT
- 2 EACH	D-3(1) MODIFIED "DAWSON FARM/CLIMBING IVY" (32"x96") - MAST ARM MOUNT
- 2 EACH	D-3(1) "GREAT SENECA" (16"x96") - MAST ARM MOUNT
- 1 EACH	R3-5(R) (30"x36") - MAST ARM MOUNT
- 1 EACH	R3-5(L) (30"x36") - MAST ARM MOUNT
- 2 EACH	ASSOCIATED SHIELD ASSEMBLY (30"x51") - (BANDED TO SIGNAL POLE)
- 2 EACH	ASSOCIATED SHIELD ASSEMBLY (48"x75") - (BANDED TO SIGNAL POLE)
- 2 EACH	W3-3 NEW - GROUND MOUNT ON WOOD SIGN SUPPORTS

1 EA. AN ASC/2S TRAFFIC SIGNAL CONTROLLER WITH VIDEO INTERFACE EQUIPMENT AND LAU HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	4 EA	MAINTENANCE OF TRAFFIC
2001	1 CY	CLASS 2 EXCAVATION
2002	10 CY	TEST PIT EXCAVATION
5001	2 EA	PERMANENT HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING ARROWS
5002	4 EA	PERMANENT HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING LETTERS
5004	380 LF	12 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
5005	130 LF	24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
5006	42 LF	5 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
5007	110 LF	5 IN. YELLOW HEAT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
5008	80 LF	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS - ANY WIDTH
6000	90 SF	FURNISH AND INSTALL DETECTABLE WARNING SURFACE
6001	8 LF	FURNISH AND INSTALL DEPRESSED CURB AND GUTTER
6002	22 LF	STANDARD TYPE A COMBINATION CURB & GUTTER 12" GUTTER PAN 8" DEPTH
6004	315 SF	4 INCH CONCRETE SIDEWALK
8000	20 LF	PULL BACK AND REFEED EXISTING COMMUNICATIONS CABLE
8000	1 EA	FURNISH AND INSTALL 16"x14"x12" NEMA 3R SINGLE DOOR SPLICE ENCLOSURE - POLE MOUNTED WITH LOCK AND KEYHOLE COVER
8000	10 LF	FURNISH AND INSTALL 3-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
8000	LS	REMOVAL AND DELIVERY OF EXISTING STREET LIGHT POLES
8000	320 LF	FURNISH AND INSTALL 2-4" PVC SCHEDULE 80 CONDUITS - SLOTTED
8000	2 EA	FURNISH AND INSTALL 20' LIGHTING ARM
8000	1 EA	FURNISH AND INSTALL 10' LIGHTING ARM
8001	2 EA	250' VIDEO CABLE TO CONTROLLER
8003	2 EA	500' VIDEO CABLE TO CONTROLLER
8004	1 EA	ADJUST EXISTING HANDHOLE TO GRADE INCLUDING COLLAR
8006	1 EA	CUT, CLEAN AND CAP TRAFFIC SIGNAL STRUCTURE
8010	8 EA	FURNISH AND INSTALL 12 INCH PEDESTRIAN SIGNAL HEAD SECTION
8011	39 EA	FURNISH AND INSTALL 12 INCH VEHICULAR SIGNAL HEAD SECTION
8014	3 EA	FURNISH AND INSTALL 250W HPS LUMINAIRE WITH PHOTOCCELL
8015	1 EA	FURNISH AND INSTALL 3" WEATHERHEAD
8019	3 EA	FURNISH AND INSTALL 8 IN VEH SIG HEAD SECTION
8020	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT FOR SIGNAL
8022	1 EA	FURNISH AND INSTALL MAST ARM POLE AND 50 FT MAST ARM
8023	1 EA	FURNISH AND INSTALL MAST ARM POLE AND 60 FT MAST ARM
8030	2 EA	FURNISH AND INSTALL PEDESTAL POLE (ANY SIZE)
8032	2 EA	FURNISH AND INSTALL PUSHBUTTON AND SIGN
8034	1 EA	FURNISH AND INSTALL TWIN MAST ARM POLE AND 50 FT/60 FT MAST ARMS
8048	1 EA	REMOVE AND DISPOSE OF MATERIALS AND EQUIPMENT PER ASSIGNMENT
8049	4 EA	VIDEO DETECTION CAMERA
8050	1 EA	VIDEO INTERFACE EQUIPMENT
8051	35 LF	3" PVC SCHEDULE 80 CONDUIT - TRENCHED
8052	125 LF	4" PVC SCHEDULE 80 CONDUIT - BORED
8053	85 LF	4" PVC SCHEDULE 80 CONDUIT - TRENCHED
8059	17 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8061	130 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH X 6 INCH
8062	590 LF	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8074	7 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8076	40 SF	INSTALL GROUND MOUNTED SIGN
8077	247 SF	INSTALL OVERHEAD SIGN
8078	135 LF	FURNISH AND INSTALL 12-PAIR COMMUNICATIONS CABLE, JELLYFILLED
8082	6 EA	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETERx10 FOOT LENGTH
8084	450 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 AWG)
8085	350 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO 14 AWG)
8086	300 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8087	1850 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8088	660 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG) TC
8093	25 LF	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8095	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR.

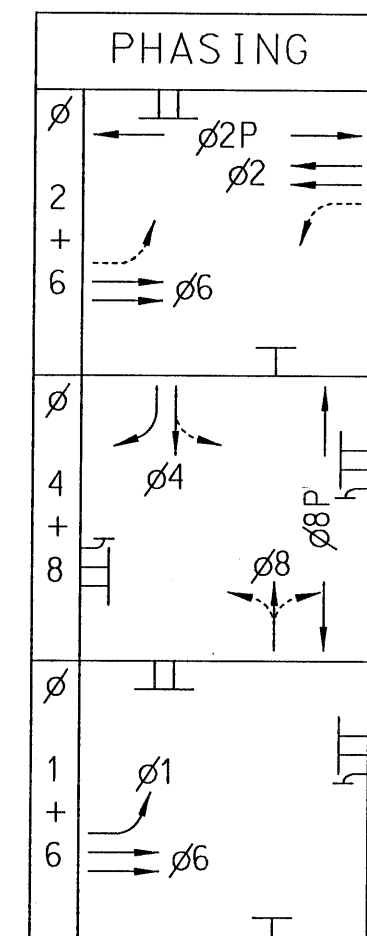
QUANTITY	DESCRIPTION
ALL REMOVED SIGNAL MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF THE STREET LIGHT POLES WHICH SHALL BE RETURNED TO THE MONTGOMERY COUNTY YARD.	

SEQUENCE OF OPERATION

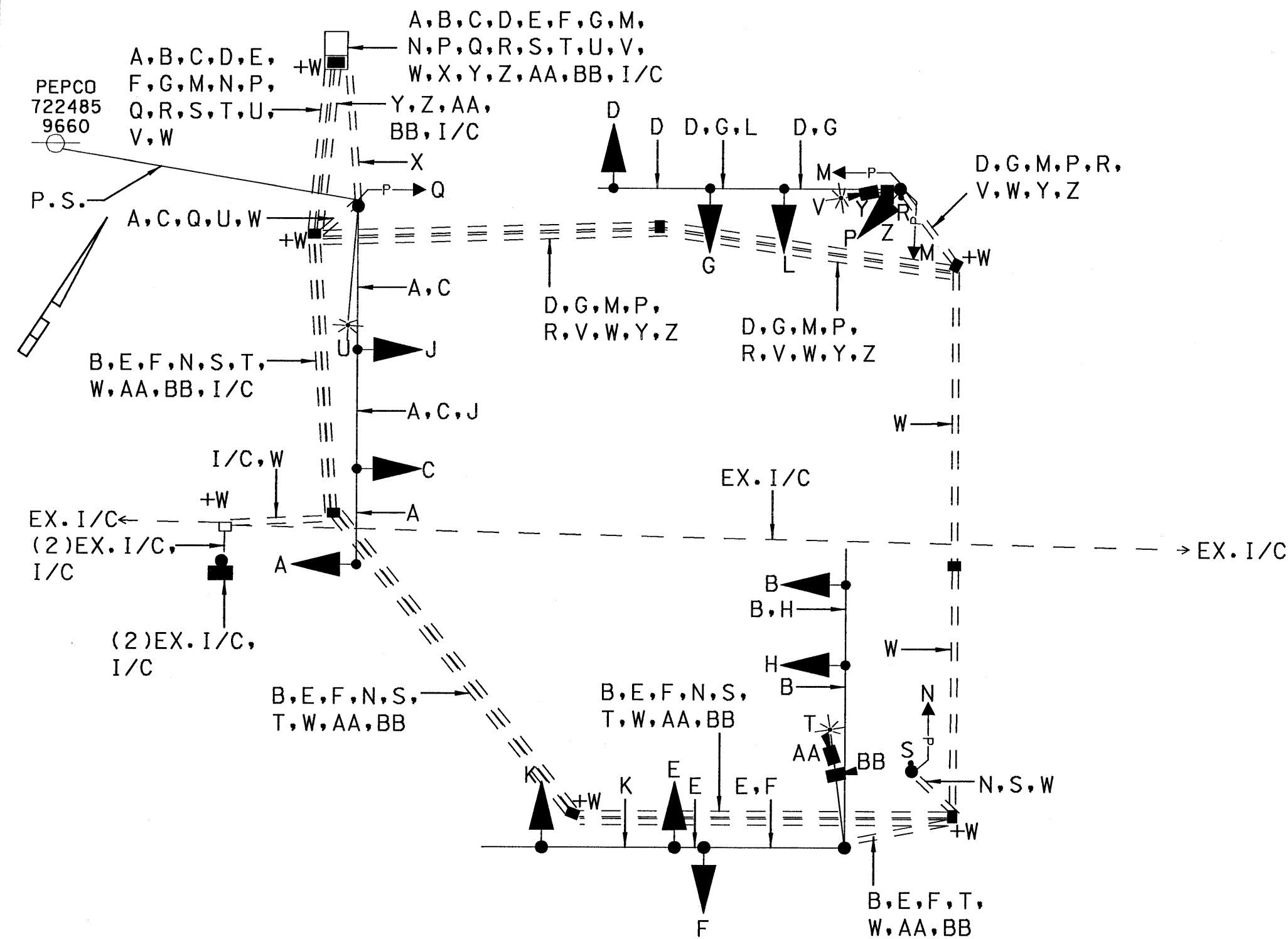
MD 119
(GREAT SENECA HWY)
RUNS IN A
NORTH-SOUTH
DIRECTION
INTERSECTION: MD 119 (GREAT SENECA HIGHWAY) AND DAWSON FARM RD./CLIMBING IVY DR.

SIGNAL NO.	SEQUENCE OF OPERATION												A	H
	1	2	3	4	5	6	7	8	9	10	11	12		
1	G	G	Y	R	R	R	R	R	R	R	G-KY-G	G	Y	
2	G	G	Y	R	R	R	R	R	R	R	G-KY-G	G	Y	
3	G	G	Y	R	R	R	R	R	R	R	G-KY-G	G	Y	
4	G	G	Y	R	R	R	R	R	R	R	G	G	Y	
5	G	G	Y	R	R	R	R	R	R	R	R	R	Y	
6	G	G	Y	R	R	R	R	R	R	R	R	R	Y	
7	R	R	R	R	G	G	C	Y	R	R	R	R	R	
8	R	R	R	R	G	G	C	Y	R	R	R	R	R	
9	R	R	R	R	G	G	C	Y	R	R	R	R	R	
10	R	R	R	R	G	G	C	Y	R	R	R	R	R	
11	R	R	R	R	G	G	C	Y	R	R	R	R	R	
12	R	R	R	R	G	G	C	Y	R	R	R	R	R	
13	W	DWF	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	-	
14	W	DWF	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	-	
15	DW	DW	DW	DW	DW	DW	DW	DWF	DW	DW	DW	DW	-	
16	DW	DW	DW	DW	DW	DWF	DW	DW	DW	DW	DW	DW	-	
PHASE	Ø 2 & 6			ALL RED			Ø 4 & 8			ALL RED			Ø 1 & 6	

SIGNAL HEAD INDICATIONS			
SIGNAL NUMBERS	1,3	2	4-12
TOTAL	2	1	9
LEGEND			
OPTICALLY LIMITED			
R RED			
Y YELLOW			
G GREEN			
ARROW			
W WALK			
DW DON'T WALK			
12" 12" LENS			
F FLASHING	12"	8"/12"	12"



WIRING DIAGRAM



WIRING KEY

A, B, C, D, E, F, G, P	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	X	3-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
H, J, K, L, M	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	Y, Z	CAMERA TO CONTROL CABINET CABLE (250' LONG)
N, Q	3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	AA, BB	CAMERA TO CONTROL CABINET CABLE (500' LONG)
R, S	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	I/C	12-PAIR COMMUNICATION CABLE, JELLY FILLED (UNDER GROUND)
T, U, V	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)	P.S.	PROPOSED OVERHEAD SERVICE
W	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)	+	3/4" DIAMETER x 10' LONG SOLID COPPER GROUND ROD



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION
MD 119 (GREAT SENECA HIGHWAY) AND
DAWSON FARM ROAD/CLIMBING IVY DRIVE
GERMANTOWN, MARYLAND

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DRAWN BY: S. HOLLIE
CHECKED BY: B. BRANDT
SCALE: NONE
DATE: JULY 1, 2003

F.A.P. NO. AC-STPG-0005(786)E
S.H.A. NO. X-1065235
COUNTY: MONTGOMERY
LOG MILE: 150119006.63

TS NO. TS-4261
T.I.M.S. NO. F592

SHEET NO. 2 OF 2